

Replacement Page 1, 1st Paragraph

BACKGROUND FO THE INVENTION

The invention relates to a method for producing melt-stable homopolyesters and copolyesters by ring-opening polymerization of the corresponding cyclic monomers, for example, the cyclic diesters of lactic acid, in the presence of an initiator/stabilizer system.

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SUMMARY OF THE INVENTION

In view of the initiator-caused difficulties of the technical controllability of the ring-opening polymerization, the unsatisfactory constancy of the product properties of polyesters synthesized in this way, as well as the unsatisfactory melt stability, it is the object of this invention to propose additives and methods that enable the discontinuous or continuous production in differently designed facilities of melt-stable homopolyesters and copolyesters that can be polymerized starting from cyclical esters of the L-lactic acid and D,L- lactic acid and other cyclical monomers, in particular, additional cyclical esters, and that enable their processing without back conversion of monomer. Preferably, molecularly especially uniform products are to be produced independent of the polymerization conditions.

Replacement Page 10, Lines 17 and 18

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 shows the *in vitro* decomposition of poly-D,L-lactides as a function of the monomer contents at 37 °C.

Fig. 2 shows molecular weight/time courses for the polymerization of the L,L-dilactide as a function of mixing equipment, wherein polymerization is carried out in the presence of 7.5×10^{-5} mol/mol $\text{Sn}(\text{oct})_2$.

Fig. 3 shows the course of polymerization of L,L-dilactide in the presence of 7.5×10^{-5} mol/mol $\text{Sn}(\text{oct})_2$ as initiator, with 0.01% 9,10-dihydro-9-oxa-10-phosphaphenanthrene-10-oxide being added as soon as the desired polymerization degree has been approximately reached; mixing is realized in a screw agitator at 195 °C.

Fig. 4 shows in comparison to Fig. 3 the course of polymerization of L,L-dilactide in the presence of only 5×10^{-5} mol/mol $\text{Sn}(\text{oct})_2$ while the same amount of 9,10-dihydro-9-oxa-10-phosphaphenanthrene-10-oxide is used.

DESCRIPTION OF PREFERRED EMBODIMENTS

In the following, the invention will be explained in more detail based on examples.

Examples